

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
 - TEXT CUT OFF AT TOP, BOTTOM OR SIDES
 - FADED TEXT
 - ILLEGIBLE TEXT
 - SKEWED/SLANTED IMAGES
 - COLORED PHOTOS
 - BLACK OR VERY BLACK AND WHITE DARK PHOTOS
-
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.



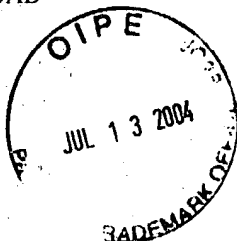
UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,178	01/25/2002	John Christian Hermansen	20837-007401	8444

29315 7590 03/26/2003

MINTZ LEVIN COHN FERRIS GLOVSKY AND POPEO PC
12010 SUNSET HILL ROAD
SUITE 900
RESTON, VA 20190



RECEIVED
MAR 31 2003

EXAMINER

HWANG, JOON H

ART UNIT PAPER NUMBER

2172

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application and procedure.

RECEIVED
JUL 14 2004
CANCELLED
Technology Center 2600

RECEIVED

JUL 14 2004

Technology Center 2100

	Done By
<input checked="" type="checkbox"/> Data Entry	<u>HL</u>
<input checked="" type="checkbox"/> Docket Entry	<u>HL</u>
<input checked="" type="checkbox"/> Docket Cross Off	<u>HL</u>
<input type="checkbox"/> Previously Entered	
<input type="checkbox"/> No Docketing Req.	
<input type="checkbox"/> Elite	
<input type="checkbox"/> Annuities	

Office Action Summary

Application No

10/055,178

Examiner

Joon H. Hwang

Applicant(s)

HERMANSEN ET AL.

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 18-31 is/are ~~withdrawn from consideration~~ *Canceled*.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

RECEIVED

JUL 14 2004

Technology Center 2100

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

1. The applicant elected claims 1-17 (Group I) and canceled claims 18-28 (Group II) and 29-31 (Group III) without prejudice in the response to restriction requirement received on 3/10/03.

The pending claims are 1-17.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshika et al. ("Improved Retrieval Of Foreign Names From Large Database", 1988, IEEE, pages 480-487) in view of Hermansen ("Automatic Name Searching in Large Data Bases of International Names," 1985, also described in lines 6-10 on page 5 in the specification).

With respect to claim 1, Oshika discloses a large database storing a set of records of proper names (section 1.0 on page 480). Oshika discloses receiving a database query name (section 2.0 on pages 480-481, section 3.0 on page 481, section 5.0 on pages 485-486, and section 6.0 on page 486). Oshika discloses determining the records in the set that are likely to match the query (section 2.0 on pages 480-481 and section 5.0 on pages 485-486). Oshika discloses selecting one of the records in the set

Art Unit: 2172

and determining whether at least a portion of the name stored in the selected records' name field has a pronunciation that is equivalent to a pronunciation of at least a portion of the query name (section 1.0 on page 480, section 2.0 on pages 480-481, and section 3.0 on page 481). Oshika discloses comparing at least a portion of the name included in the record's name field to at least a portion of the query name for each record that is determined for each record that is determined to likely match the query (section 2.0 on pages 480-481, section 3.0 on page 481, section 4.0 on page 485, and section 5.0 on page 485-486). Oshika is silent on determining a similarity measurement between the query name and the name stored in the record's name field. However, Hermansen discloses determining a similarity measurement between the query name and the name stored in the record's name field based on the comparison for each record that is determined to likely match the query (section 3.2 on page 46-50, section 3.3 on pages 52-55, and section 3.4 on pages 55-59). Hermansen also discloses comparing at least a portion of the name included in the record's name field to at least a portion of the query name for each record that is determined for each record that is determined to likely match the query (section 2.1 on pages 15-16, section 3.2 on page 46-50, section 3.3 on pages 52-55, and section 3.4 on pages 55-59). Therefore, based on Oshika in view of Hermansen, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine a similarity measurement between the query name and the record name in order to search proper names effectively.

With respect to claim 2, Hermansen further discloses n-gram comparison (section 2.5.1 on pages 24-28). Therefore, the limitations of claim 2 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

With respect to claim 3, Oshika discloses the query name in character strings of the Roman alphabet (section 4.0 on page 485). Hermansen also discloses the query name in character strings of the Roman alphabet (section 4.1 on pages 68-71).

With respect to claim 4, Oshika discloses phonetic strings (section 3.0 on page 481). Oshika is silent on generating a character string from a phonetic alphabet. However, Hermansen discloses generating a character string representing a pronunciation of at least a portion of the name stored in the record's name field by using symbols from a phonetic alphabet and associating the generated character string with the record (section 2.3 on pages 23-24, section 4.1 on pages 68-71 and section 4.1.1 on pages 71-73). Therefore, based on Oshika in view of Hermansen, it would have been obvious to one having ordinary skill in the art at the time the invention was made to generate record's name in phonetic alphabets in order to search proper names effectively.

With respect to claim 5, Oshika discloses generating at least one character string representing a pronunciation of at least a portion of the query name by using phonetic alphabets (section 3.0 on page 481).

With respect to claim 6, Oshika disclose comparing records and the query name in phonetic strings (section 2.0 on pages 480-481 and section 3.0 on page 481). Oshika is silent on comparing the generated record's name in phonetic alphabets to the

With respect to claim 14, Oshika further discloses analyzing the query name to determine whether it belongs to a culture included in a set of identified cultures, selecting a set of rules associated with a culture of the query name, and generating one or more keys of the query name (section 3.0 on page 481, section 3.1 on page 481-483, section 4.0 on page 485, and section 5.0 on pages 485-486). Therefore, the limitations of claim 14 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

The limitations of claim 15 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

The limitations of claim 16 are rejected in the analysis of claim 2 above, and the claim is rejected on that basis.

The limitations of claim 17 are rejected in the analysis of claim 15 above, and the claim is rejected on that basis.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 703-305-6469. The examiner can normally be reached on 9:30-6:00(M-F).

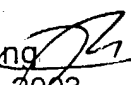
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on 703-305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5397 for regular communications and 703-308-5397 for After Final communications.

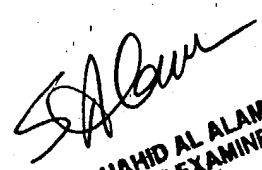
Application/Control Number: 10/055,178

Page 7

Art Unit: 2172

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Joon Hwang 
March 23, 2003


SHAHID AL ALAM
PATENT EXAMINER



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,178	01/25/2002	John Christian Hwang	20837-007401	8444

29315 7590 12/12/2003

MINTZ LEVIN COHN FERRIS GLOVSKY AND POPEO PC
12010 SUNSET HILLS ROAD
SUITE 900
RESTON, VA 20190

EXAMINER

HWANG, JOON H

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 12/12/2003

RECEIVED
DEC 15 2003

MINTZ LEVIN COHN FERRIS
GLOVSKY and POPEO pc

RECEIVED
CANCELED

Technology Center 2600

Please find below and/or attached an Office communication concerning this application or proceeding.

	Done By
<input checked="" type="checkbox"/> Data Entry	<u>HL</u>
<input checked="" type="checkbox"/> Docket Entry	<u>2/12/04 + 3/12/04</u>
<input checked="" type="checkbox"/> Docket Cross Off	<u>HL</u>
<input type="checkbox"/> Previously Entered	_____
<input type="checkbox"/> No Docketing Req.	_____
<input type="checkbox"/> Elite	_____
<input type="checkbox"/> Annuities	_____

RECEIVED

JUL 14 2004

Technology Center 2100

Office Action Summary

Application No.

10/055,178

JUL 13 2004

Applicant(s)

HERMANSEN ET AL.

Examiner

Joon H. Hwang

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

RECEIVED

JUL 14 2004

Technology Center 2100

Application/Control Number: 10/055,178
Art Unit: 2172

Page 2

DETAILED ACTION

1. The applicants amended claims 1, 6, and 8 in the amendment received on 10/03/03.

The pending claims are 1-17.

Response to Arguments

2. Applicant's arguments filed in the amendment received on 10/03/03 have been fully considered but they are not persuasive.

The applicants argue that Oshika does not teach or suggest determining whether each of the records in the set is likely to match the query as a result of a use of Hidden Markov Model (HMM) as a language discriminator. However, the examiner respectfully traverses. Oshika introduces current name searching techniques, wherein matching proper names in a database are retrieved based on a query name (section 1.0 and 2.0 on pages 480-481). Matching in Oshika teaches comparing and determining. Oshika discloses classifying a query name as to a language source for the improvement of the current name searching techniques in order to improve in spelling variation of the query name (section 3.0 on page 481), wherein the classification utilizes HMMs. Therefore, a use of HMMs does not exclude basic processes, such as receiving a query, matching names in the database with the query, and displaying a result. Furthermore, the examiner respectfully traverses the argument for claim 14 that language teaches culture in other words, culture and language are not different mechanisms for discriminating names. For the sake of the argument regarding to claim 14, Hermansen also discloses

Application/Control Number: 10/055,178

Page 3

Art Unit: 2172

identifying a source or cultural origin of a query name in order to obtain an algorithm that varies the spelling of the query in name searching (lines 13-22 on page 64, lines 8-17 on page 72, and lines 18-23 on page 74). Therefore, the applicants' arguments are not persuasive.

"Prima facie case of obviousness is established when teachings of prior art appear to suggest claimed subject matter to person of ordinary skill in art; it is incumbent upon applicant to go forward with objective evidence of obviousness once prima facie case is established." In re Rinehart (CCPA) 189 USPQ 143 Decided Mar. 11, 1976 No. 75-608 U.S. Court of Customs and Patent Appeals.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oshika et al. ("Improved Retrieval Of Foreign Names From Large Database", 1988, IEEE, pages 480-487) in view of Hermansen ("Automatic Name Searching in Large Data Bases of International Names," 1985, also described in lines 6-10 on page 5 in the specification).

With respect to claim 1, Oshika discloses a large database storing a set of records of proper names (section 1.0 on page 480). Oshika discloses receiving a

Application/Control Number: 10/055,178

Page 4

Art Unit: 2172

database query name (section 2.0 on pages 480-481, section 3.0 on page 481, section 5.0 on pages 485-486, and section 6.0 on page 486). Oshika discloses determining the records in the set that are likely to match the query (section 2.0 on pages 480-481 and section 5.0 on pages 485-486). Oshika discloses selecting one of the records in the set and determining whether at least a portion of the name stored in the selected records' name field has a pronunciation that is equivalent to a pronunciation of at least a portion of the query name (section 1.0 on page 480, section 2.0 on pages 480-481, and section 3.0 on page 481). Oshika discloses comparing at least a portion of the name included

in the record's name field to at least a portion of the query name for each record that is determined for each record that is determined to likely match the query (section 2.0 on pages 480-481, section 3.0 on page 481, section 4.0 on page 485, and section 5.0 on page 485-486). Oshika is silent on determining a similarity measurement between the query name and the name stored in the record's name field. However, Hermansen discloses determining a similarity measurement between the query name and the name stored in the record's name field based on the comparison for each record that is determined to likely match the query (section 3.2 on page 46-50, section 3.3 on pages 52-55, and section 3.4 on pages 55-59). Hermansen also discloses comparing at least a portion of the name included in the record's name field to at least a portion of the query name for each record that is determined for each record that is determined to likely match the query (section 2.1 on pages 15-16, section 3.2 on page 46-50, section 3.3 on pages 52-55, and section 3.4 on pages 55-59). Therefore, based on Oshika in view of Hermansen, it would have been obvious to one having ordinary skill in the art at

Application/Control Number: 10/055,178
Art Unit: 2172

Page 5

the time the invention was made to determine a similarity measurement between the query name and the record name in order to search proper names effectively.

With respect to claim 2, Hermansen further discloses n-gram comparison (section 2.5.1 on pages 24-28). Therefore, the limitations of claim 2 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

With respect to claim 3, Oshika discloses the query name in character strings of the Roman alphabet (section 4.0 on page 485). Hermansen also discloses the query name in character strings of the Roman alphabet (section 4.1 on pages 68-71).

With respect to claim 4, Oshika discloses phonetic strings (section 3.0 on page 481). Oshika is silent on generating a character string from a phonetic alphabet. However, Hermansen discloses generating a character string representing a pronunciation of at least a portion of the name stored in the record's name field by using symbols from a phonetic alphabet and associating the generated character string with the record (section 2.3 on pages 23-24, section 4.1 on pages 68-71 and section 4.1.1 on pages 71-73). Therefore, based on Oshika in view of Hermansen, it would have been obvious to one having ordinary skill in the art at the time the invention was made to generate record's name in phonetic alphabets in order to search proper names effectively.

With respect to claim 5, Oshika discloses generating at least one character string representing a pronunciation of at least a portion of the query name by using phonetic alphabets (section 3.0 on page 481).

Application/Control Number: 10/055,178

Page 6

Art Unit: 2172

With respect to claim 6, Oshika disclose comparing records and the query name in phonetic strings (section 2.0 on pages 480-481 and section 3.0 on page 481).

Oshika is silent on comparing the generated record's name in phonetic alphabets to the query name. However, Hermansen discloses comparing the generated character string associated with the record to the generated character string that representing a pronunciation of at least a portion of the query name (section 2.1 on pages 15-16, section 2.3 on pages 23-24, section 3.2 on page 46-50, section 3.3 on pages 52-55, section 3.4 on pages 55-59, section 4.1 on pages 68-71, and section 4.1.1 on pages 71-

73). Therefore, based on Oshika in view of Hermansen, it would have been obvious to one having ordinary skill in the art at the time the invention was made to compare record's name in phonetic alphabets and the query name in phonetic alphabets in order to search proper names effectively.

With respect to claim 7, Oshika discloses generating first and second character strings (name variants) representing a pronunciation of at least a portion of the query name by using phonetic alphabets (section 3.0 on page 481).

With respect to claim 8, Oshika discloses generating first and second character strings (name variants) representing a pronunciation of at least a portion of the query name by using phonetic alphabets (section 3.0 on page 481). Therefore, the limitations of claim 8 are rejected in the analysis of claim 6 above, and the claim is rejected on that basis.

With respect to claims 9-12, Oshika discloses a full name, a combination of a first name and a surname, as a query name (section 2.0 on pages 480-481).

Application/Control Number: 10/055,178

Page 7

Art Unit: 2172

With respect to claim 13, Oshika discloses storing a first name and/or a surname in name fields in the database (section 1.0 on page 480, section 2.0 on page 480-481, and section 3.2 on pages 483-484).

With respect to claim 14, Oshika further discloses analyzing the query name to determine whether it belongs to a culture included in a set of identified cultures, selecting a set of rules associated with a culture of the query name, and generating one or more keys of the query name (section 3.0 on page 481, section 3.1 on page 481-483, section 4.0 on page 485, and section 5.0 on pages 485-486). Therefore, the limitations

of claim 14 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

The limitations of claim 15 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

The limitations of claim 16 are rejected in the analysis of claim 2 above, and the claim is rejected on that basis.

The limitations of claim 17 are rejected in the analysis of claim 15 above, and the claim is rejected on that basis.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Application/Control Number: 10/055,178

Page 8

Art Unit: 2172

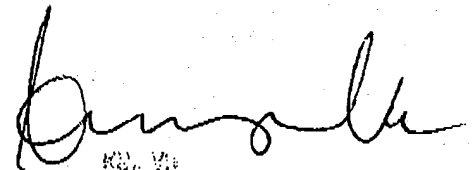
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 703-305-6469. The examiner can normally be reached on 9:30-6:00(M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y Vu can be reached on 703-305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Joon Hwang
12/8/03



KIM YU
SUPERVISOR
12/8/03